

HPM CUSTOM METAL ROOFING CUSTOM-LOCK DESIGN & DETAIL GUIDE



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CUSTOM-LOCK GENERAL NOTES PAGE 1

General Information

The enclosed roofing system information and details are a design aid and do not represent all conditions. The designer and end-user are responsible to review climate and environmental conditions such as marine and salt air, acid rain from volcanic activity, governing code requirements, and the building use to modify the details and specify the appropriate project specific materials.

Slope Requirement:

Custom-Lock roofing panels should be installed on a minimum slope of 1/4:12 or greater. Custom-Lock is intended for residential and commercial applications.

Substrate:

Custom-Lock roofing panels can be installed over both solid substrates and spaced purlins.

Panel Attachment:

Review the Custom-Lock fastener recommendations in this guide to select the correct fastener. For the attachment schedule, contact your HPM Technical Representative for proper spacing and fastener size, type, and quantities to meet the project's wind uplift (negative) load requirements. *NOTE: Concealed and exposed fasteners may be vulnerable to accelerated corrosion if not specified correctly. Consult with HPM for recommendations on appropriate fastener types.*

Condensation, Insulation, & Ventilation:

It is the designer's responsibility to determine the need and composition of condensation control materials including insulation, vapor retarders and ventilation requirements. Metal roofing is susceptible to condensation and its control should be carefully considered. Applications over rigid insulation may require solid blocking/framing for installation of perimeter flashings and drag load fasteners.

Cleaning and Maintenance

Minimum maintenance of ZINCALUME® Steel, whether bare or pre-painted, is required. Cleaning is recommended at least twice a year. See recommended procedures.

Cut Edge Corrosion Protection:

Metal roofing panels and flashings have cut edges that are not as protected as the main panel surface areas which have substrate treatment and paint as a barrier. Left untreated, the effects of exposure from marine air, and acid rain from volcanic activity will cause a condition called cut edge corrosion a.k.a. 'edge creep'. The designer should specify the end user/installer field apply a product designed to seal the cut edge and protect the base metal. This treatment should be applied during the initial install and annually as regular maintenance. *See HPM's website for information about Edge Seal™, a product developed by a leading paint manufacturer specifically to protect cut edges and retard edge creep.*

Flashings:

It is best practice to specify all flashings are the same material gauge, color, and finish as the roof panels. Where possible, flashings should be lapped away from prevailing winds. Check with an HPM Technical Representative if you intend to specify a prefinished flashing in a material different than the roof panels. The enclosed details have minimized the use of exposed fasteners where possible. The edges of flashings are shown hemmed to strengthen and minimize the exposure of cut edges. *See notes under the 'Cut Edge Corrosion Protection' section.* HPM provides standard flashing drawings as a reference in this guide and on the website. Project specific flashing drawings are generally the responsibility of the installer.

Valleys:

Valley dimensions must be the proper width to account for slope and rain conditions. Valleys must have positive slope for drainage and be kept free of debris so that water does not back up and intrude under the panels.

Touch-up Paint:

During installation minor scratches may occur. Most conditions can be treated with an air-dry Kynar paint pen. HPM provides paint pens in colors to match the roof panel system. Touch-up paint should always be used sparingly.

Thermal Movement:

Panels and flashings must allow for thermal movement (expansion and contraction) of the materials, especially where long lengths are used.

Underlayment:

Prior to installation, an underlayment material may be installed over the roof substrate. The designer should select and specify an appropriate material. The specified material must have a non-abrasive top surface that will not mar, scratch, or abrade the underside of the metal panels and flashings.

Oil Canning:

Flat metal surfaces can display waviness commonly referred to as "oil Canning". This can be caused by variations in raw material, processing variations, product handling, or variations in substrate and roofing underlayment's. Panels are available with striations, stiffening ribs, or embossments to minimize oil canning. Oil canning is a condition that occurs, not a defect and is not a cause for rejection.

Product Warranty:

Material options and warranties will vary based on project and site specific conditions such as severe marine, or acid rain from volcanic activity. Consult with your HPM Sales or Technical Representative to discuss the warranty options for your project.

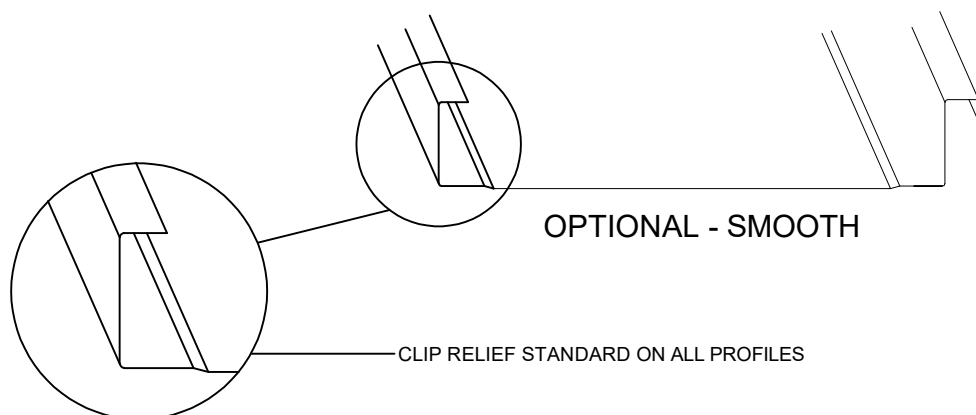
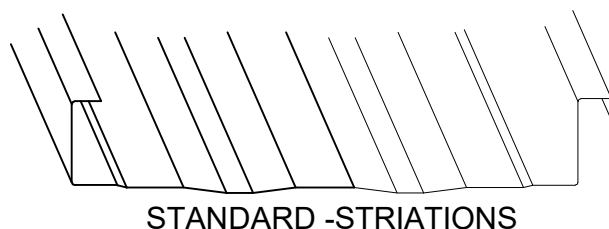
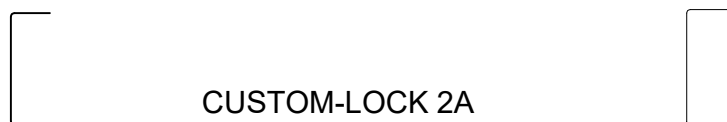
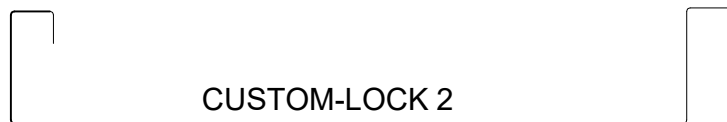
Technical Assistance:

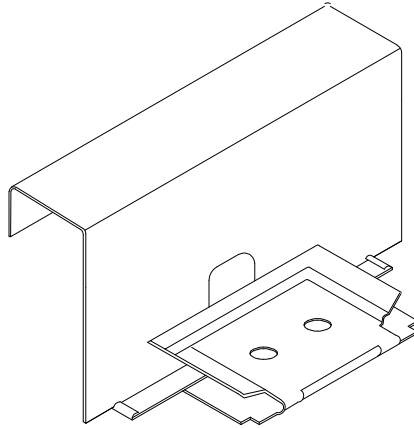
Contact your HPM Sales or Technical Representative for more information and assistance when selecting a custom metal roof system.

CUSTOM-LOCK 2 STANDARD WIDTH IS 12"
CUSTOM-LOCK 2A STANDARD WIDTH IS 12-1/4"
CUSTOM-LOCK 1.5 STANDARD WIDTH IS 14"

OTHER NON-STANDARD WIDTHS AVAILABLE, INQUIRE WITH HPM

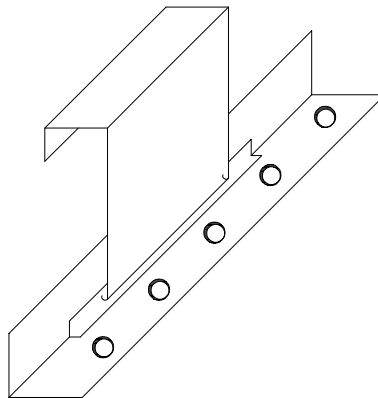
NOTE: PANEL WIDTH IS NOMINAL - VARIANCE +/- 1/8"






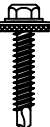
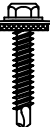






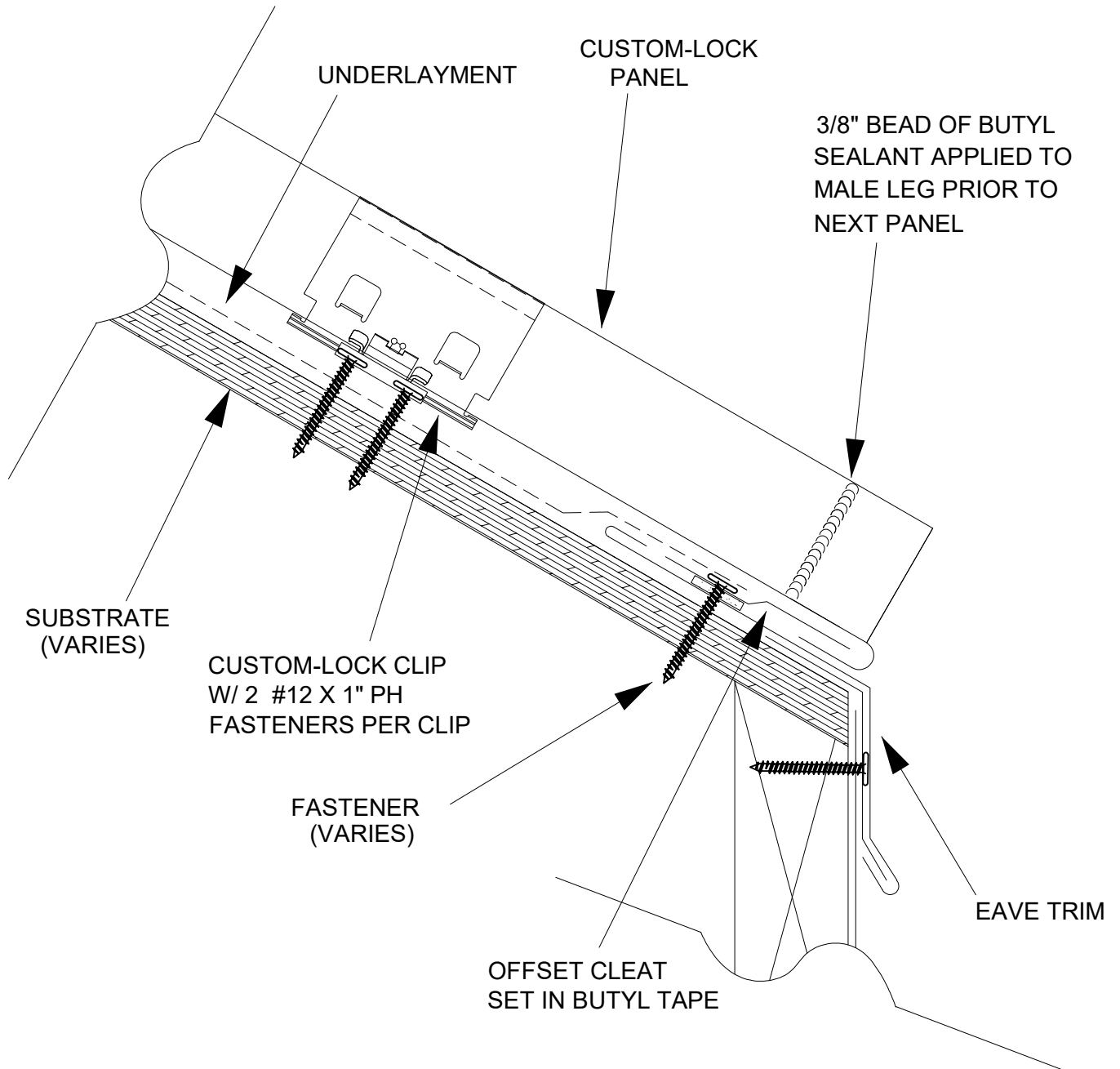
RATED FLOATING CLIP
22 ga. TOP 16 ga. BASE

AS REQUIRED FOR UL 580 RATED ASSEMBLIES
MEETS HPM ASTM E1592 TESTING CRITERIA

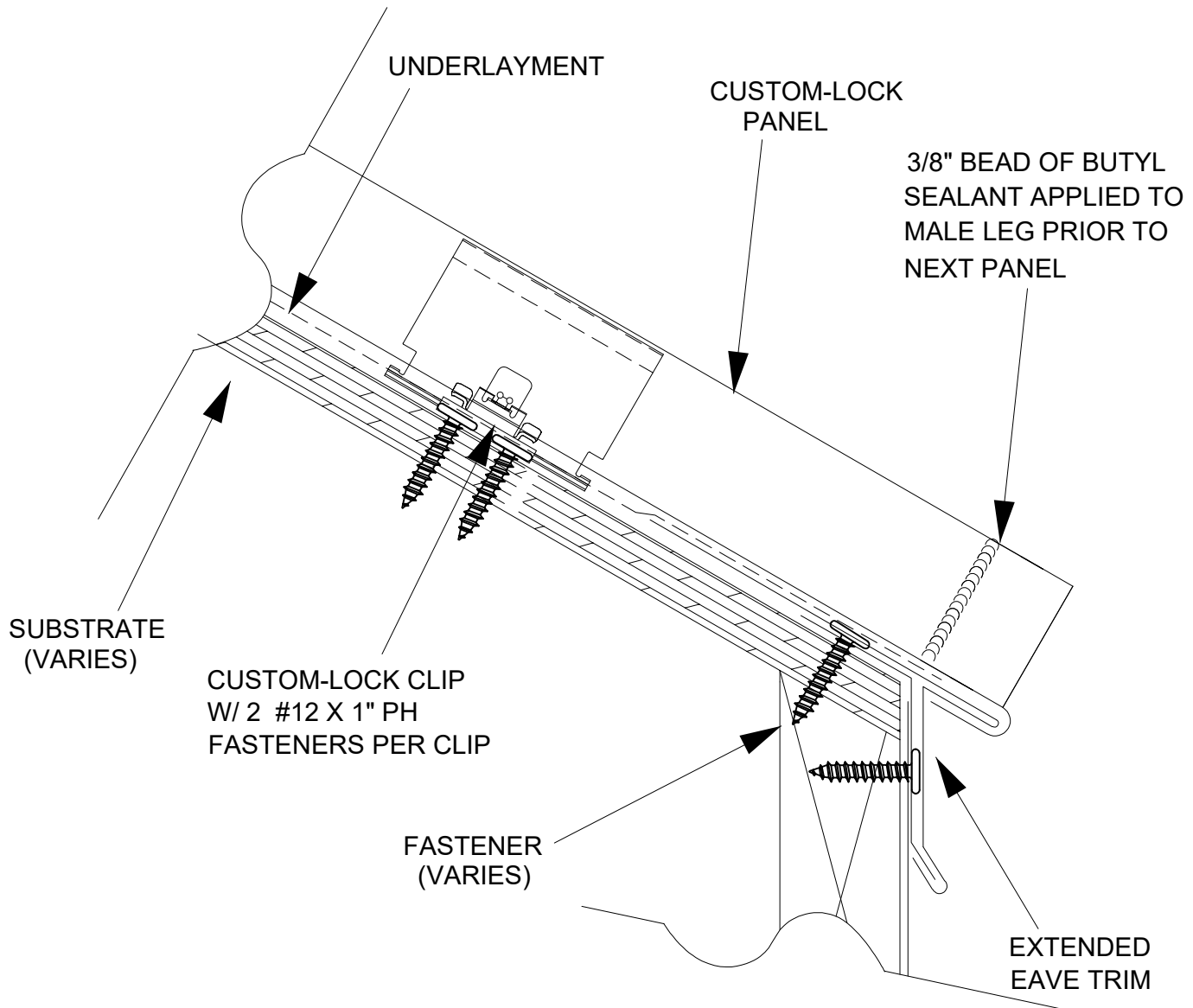


ECONOMY FLOATING CLIP
22 ga. TOP 18 ga. BASE

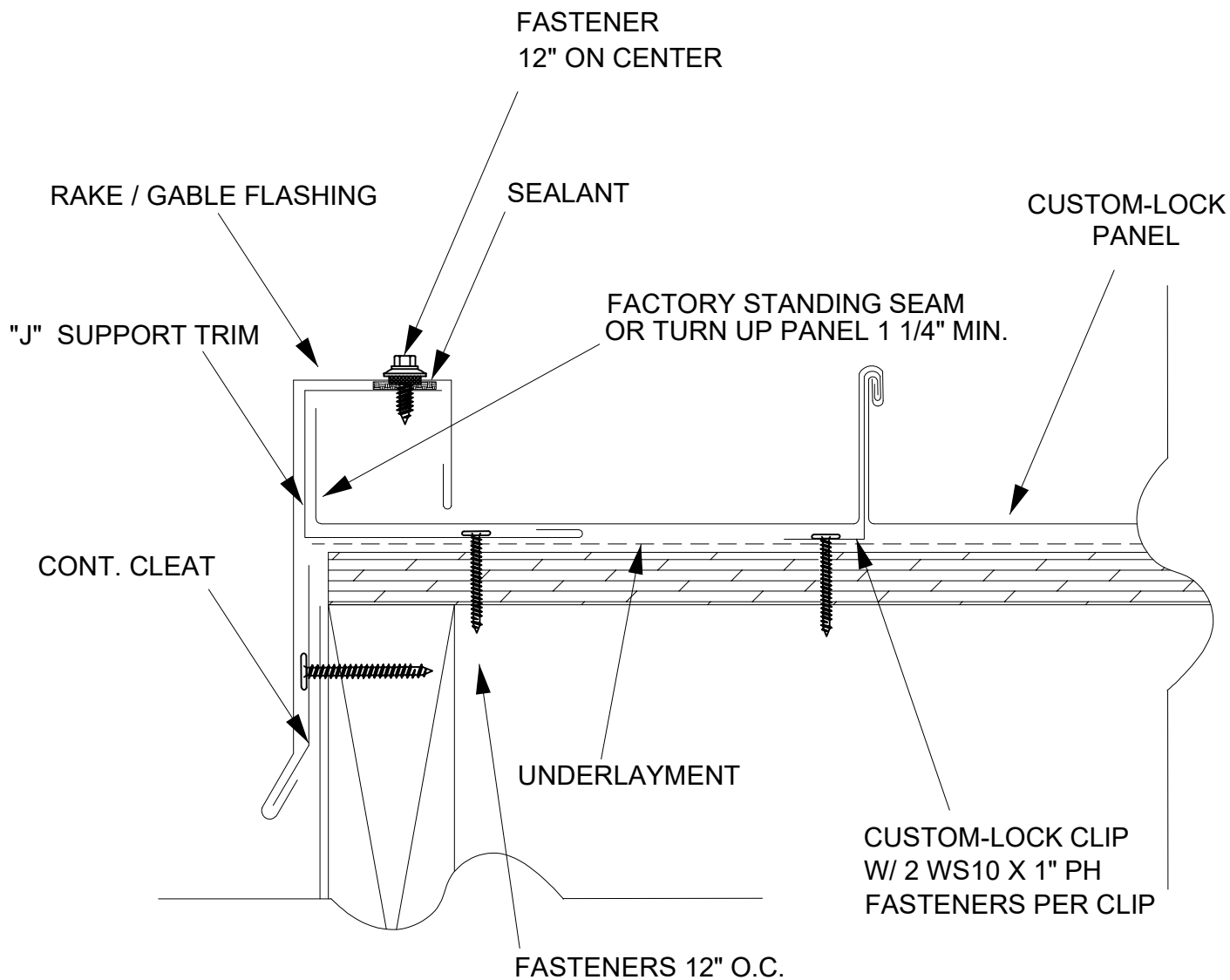
ITEM CODE	DESCRIPTION	USE	NOTES
9A64 (1") 9A65 (1.5") 9A66 (2") 9A69 (2.5") XX = COLOR	 <p>#9-15x1", 2", 2 1/2" WOOD SCREW 1/4" HEX HEAD BI-METAL EVERGRIP-300 SERIES SS</p>	PANEL TO DIMENSIONAL LUMBER	BEST SUITED FOR ZINCALUME AND ALUMINUM PANELS
9DU1034XX XX = COLOR	 <p>#10x3/4" SELF DRILLER 5/16" HEX HEAD MARUTEX - ULTRAGRIP</p>	TRIM ATTACHMENTS LIGHT GAUGE TO LIGHT GAUGE	BEST SUITED FOR ZINCALUME PANELS
9DBLAPXX XX = COLOR	 <p>#12-14x1" LAP SELF DRILLER 5/16" HEX HEAD</p>	TRIM ATTACHMENTS LIGHT GAUGE TO LIGHT GAUGE	BEST SUITED FOR ALUMINUM PANELS
9DULTRA1XX (1") 9DULTRA15XX (1.5") 9DULTRA2XX (2") 9DULTRA25XX (2.5") XX = COLOR	 <p>#12x1", 1 1/2", 2", 2 1/2" SELF DRILLER 5/16" HEX HEAD MARUTEX - ULTRAGRIP</p>	PANEL AND TRIM TO METAL DECKING OR METAL PURLINS	BEST SUITED FOR ZINCALUME PANELS
1"=9DB1XX 2"=9DB2XX XX = COLOR	 <p>#12-14x1", 2" SELF DRILLER 5/16" HEX HEAD</p>	PANEL AND TRIM TO METAL DECKING OR METAL PURLINS	BEST SUITED FOR ALUMINUM PANELS
9D121 - PLATED 9DU121 - STAINLESS	 <p>#12 X 1" SD PANCAKE</p>	STANDING SEAM CLIP SCREW	PLATED NOT RECOMMENDED FOR ALUMINUM PANELS
9A121A - PLATED 9A121SS -STAINLESS	 <p>#12 X 1" "A" POINT PANCAKE</p>	STANDING SEAM CLIP SCREW	PLATED NOT RECOMMENDED FOR ALUMINUM PANELS
SPECIAL ORDER	 <p>#14-13 X ?" HD ROOFING FASTENER AVAILABLE IN LENGTHS UP TO 12"</p>	RECOMMENDED FOR STANDING SEAM PROFILES INSTALLED OVER RIGID INSULATION	
9RIVETXX43 XX = COLOR	 <p>STST-43 STAINLESS STEEL RIVET 1/8"</p>	TRIM TO TRIM OR TRIM TO PANEL ATTACHMENTS	



NOTES:
FASTENERS MAY CHANGE DUE
TO DIFFERENT SUBSTRATES
CLIP SPACING PER UPLIFT REQUIREMENTS

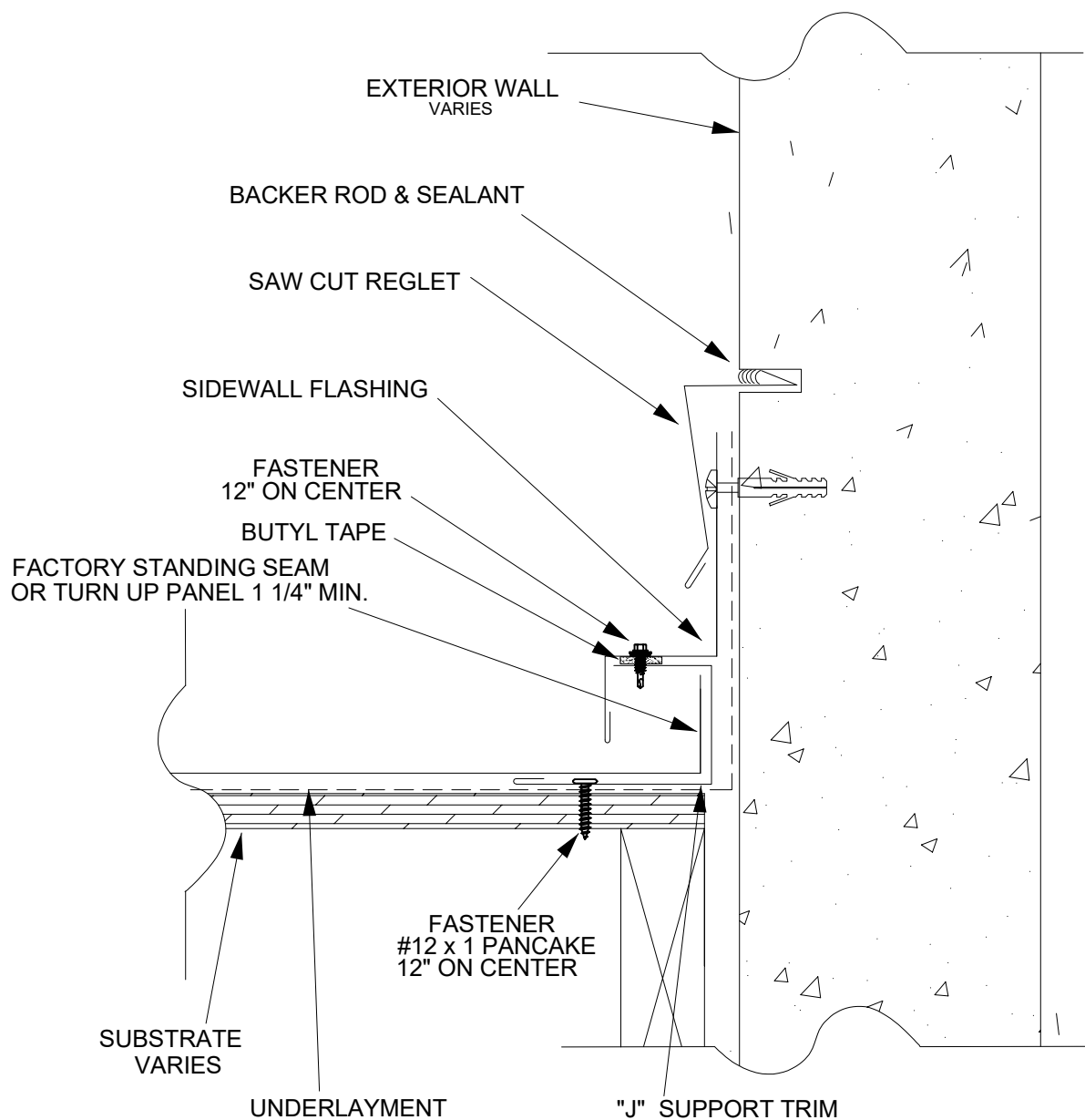


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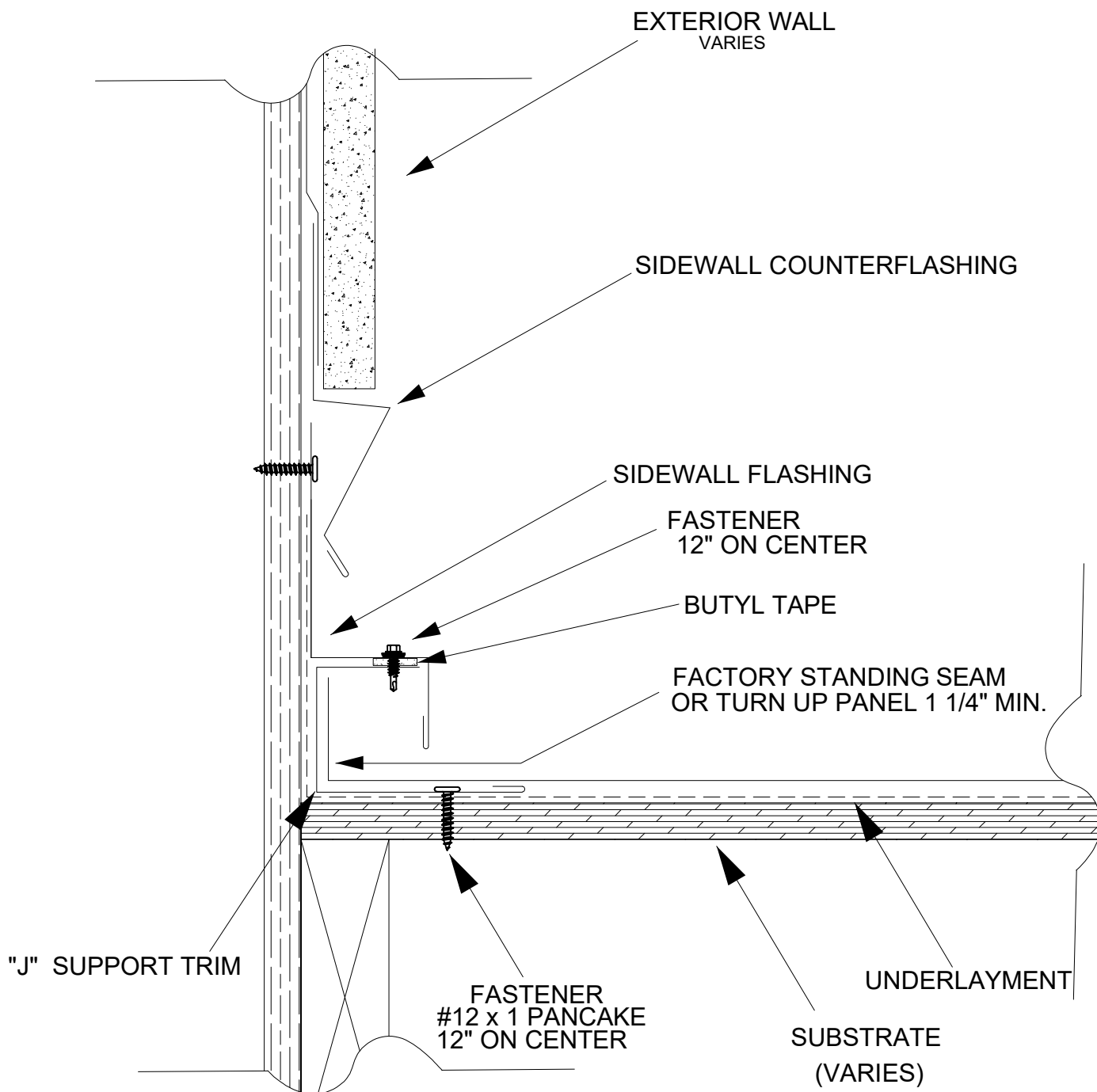
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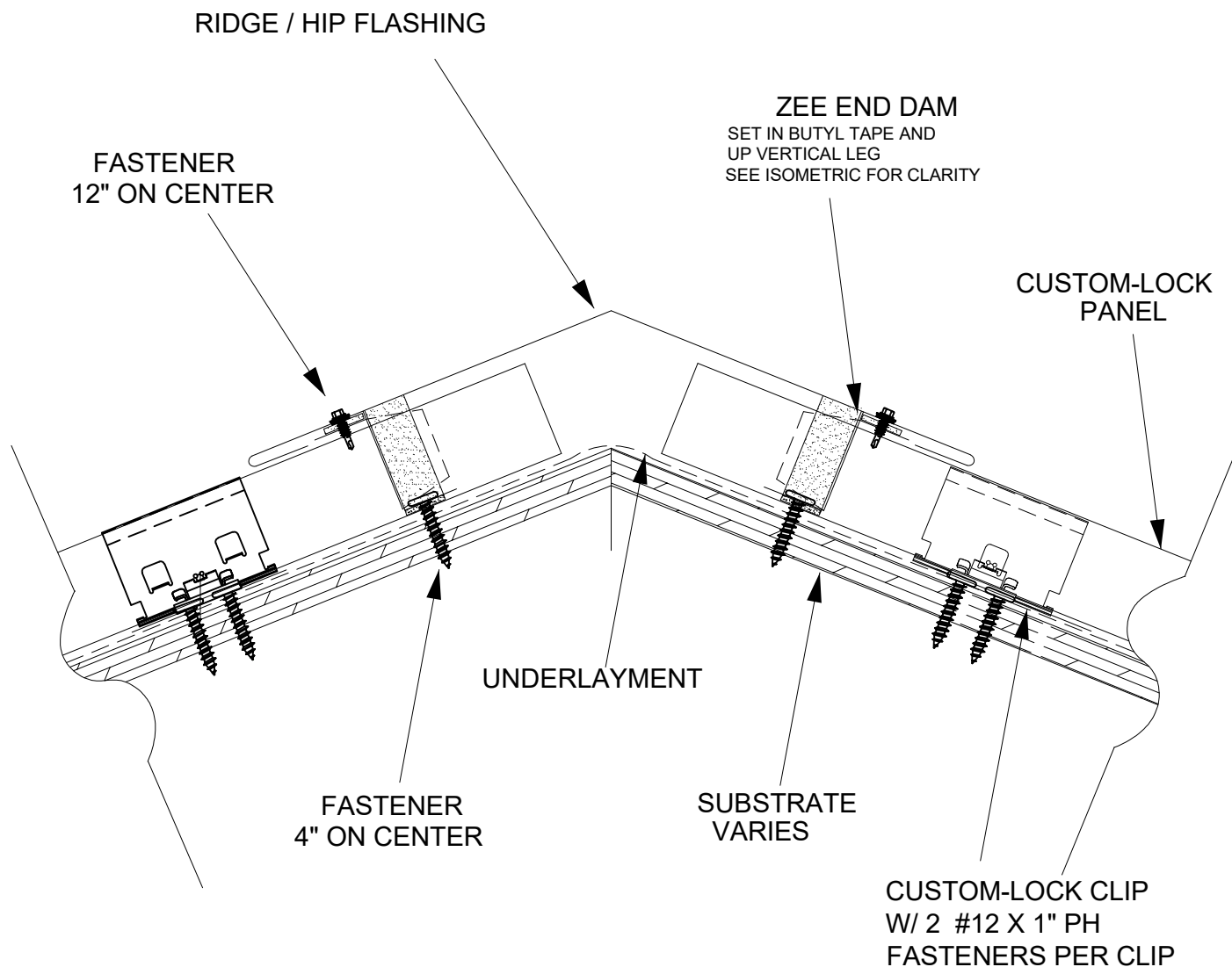
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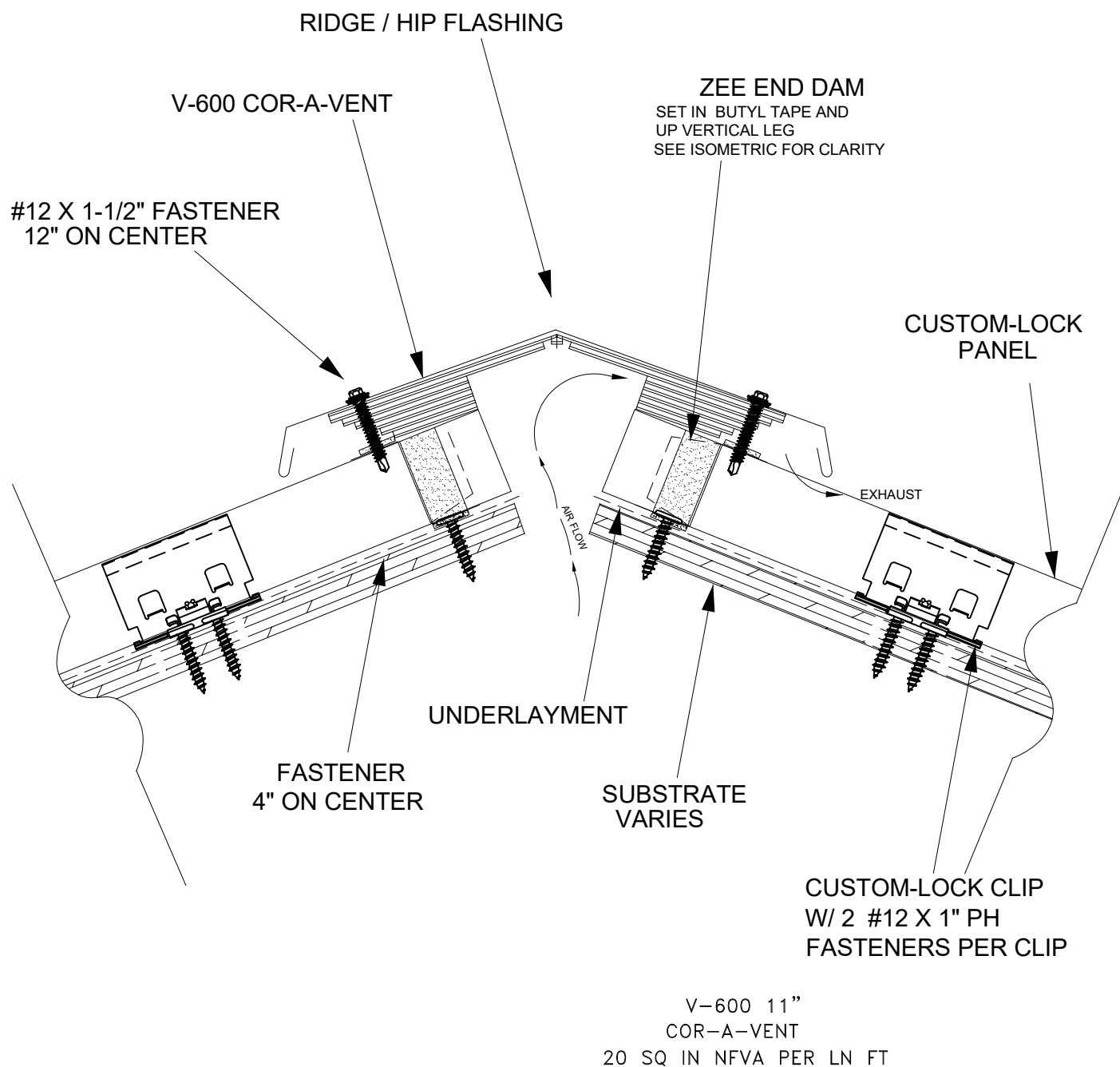


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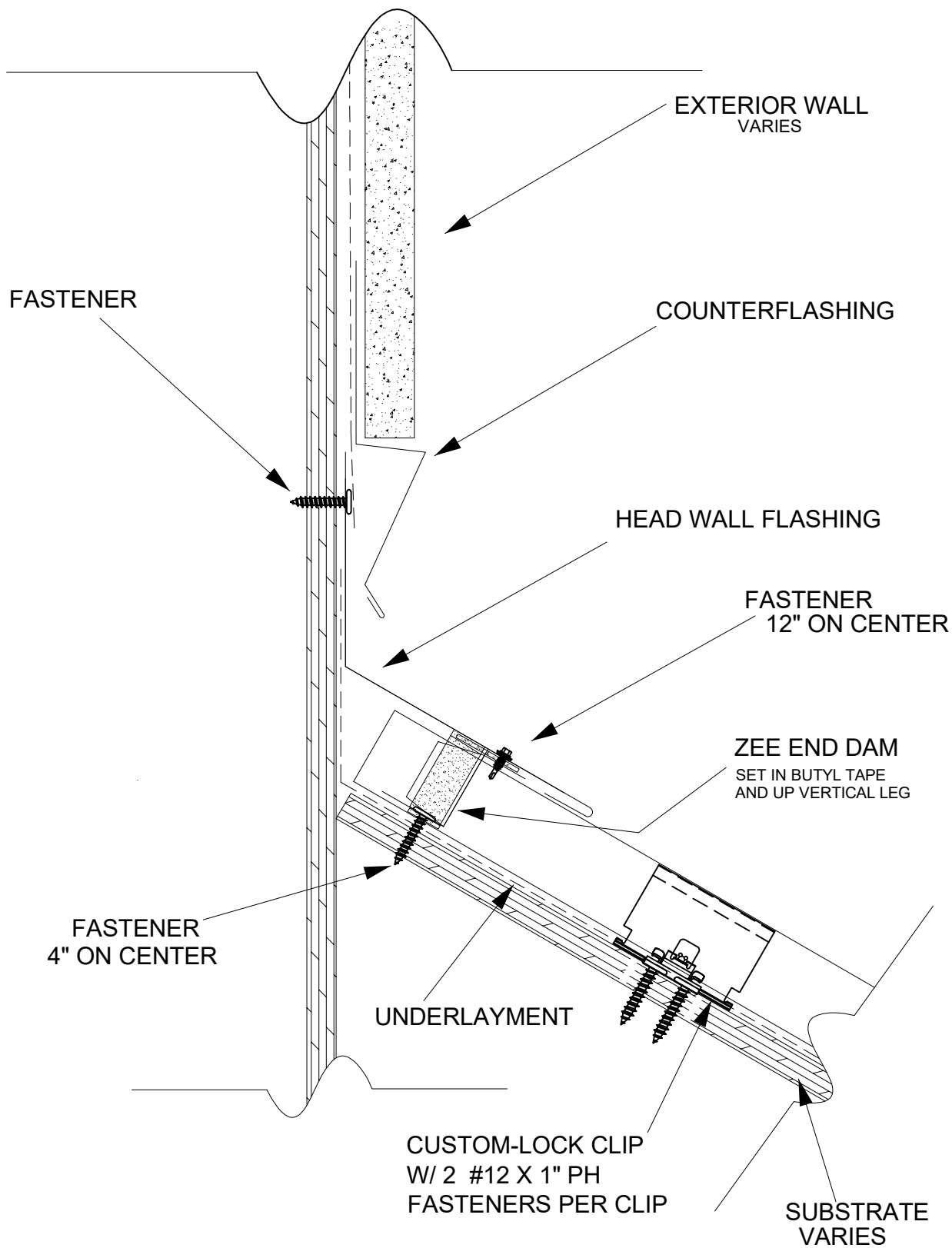


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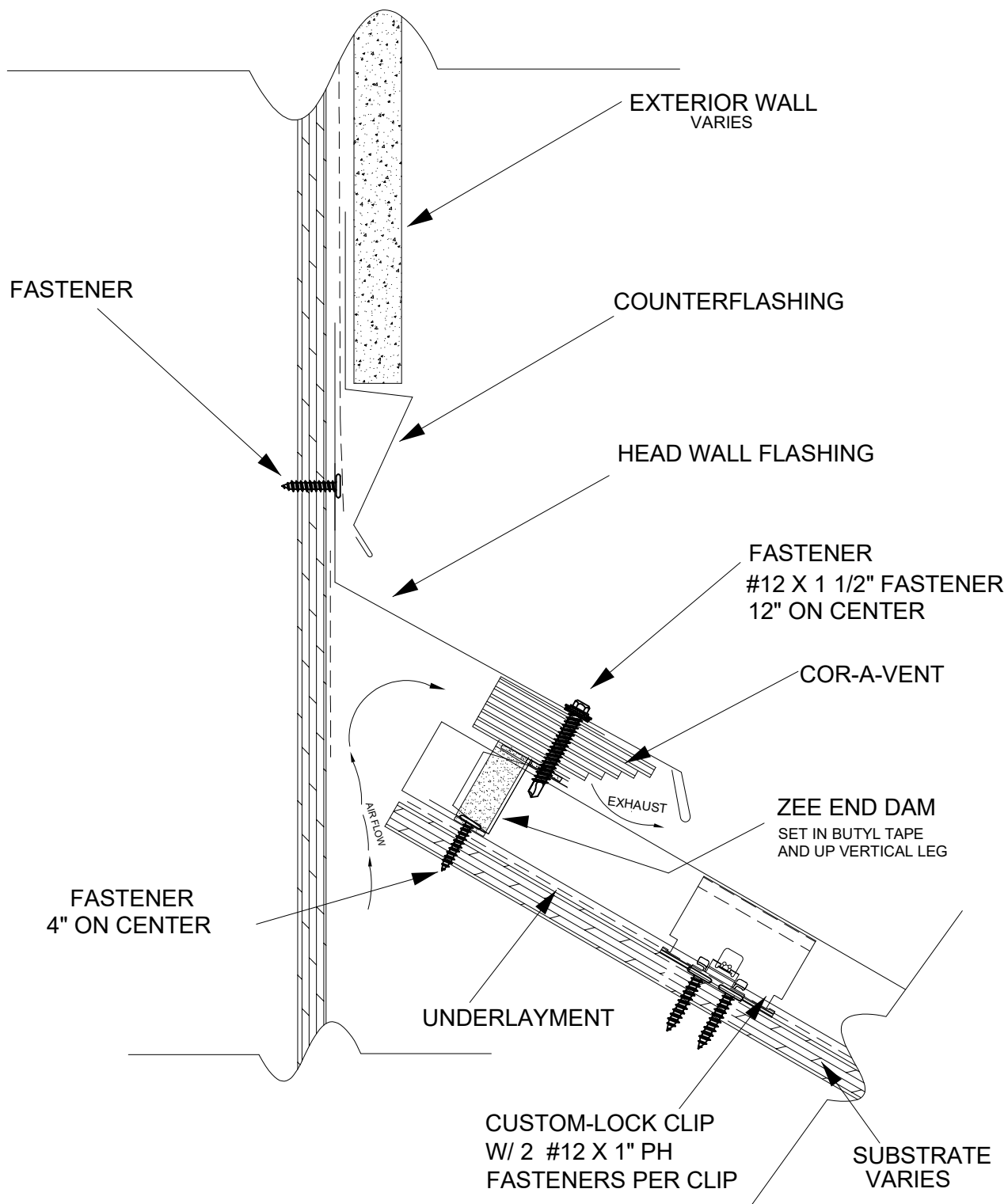


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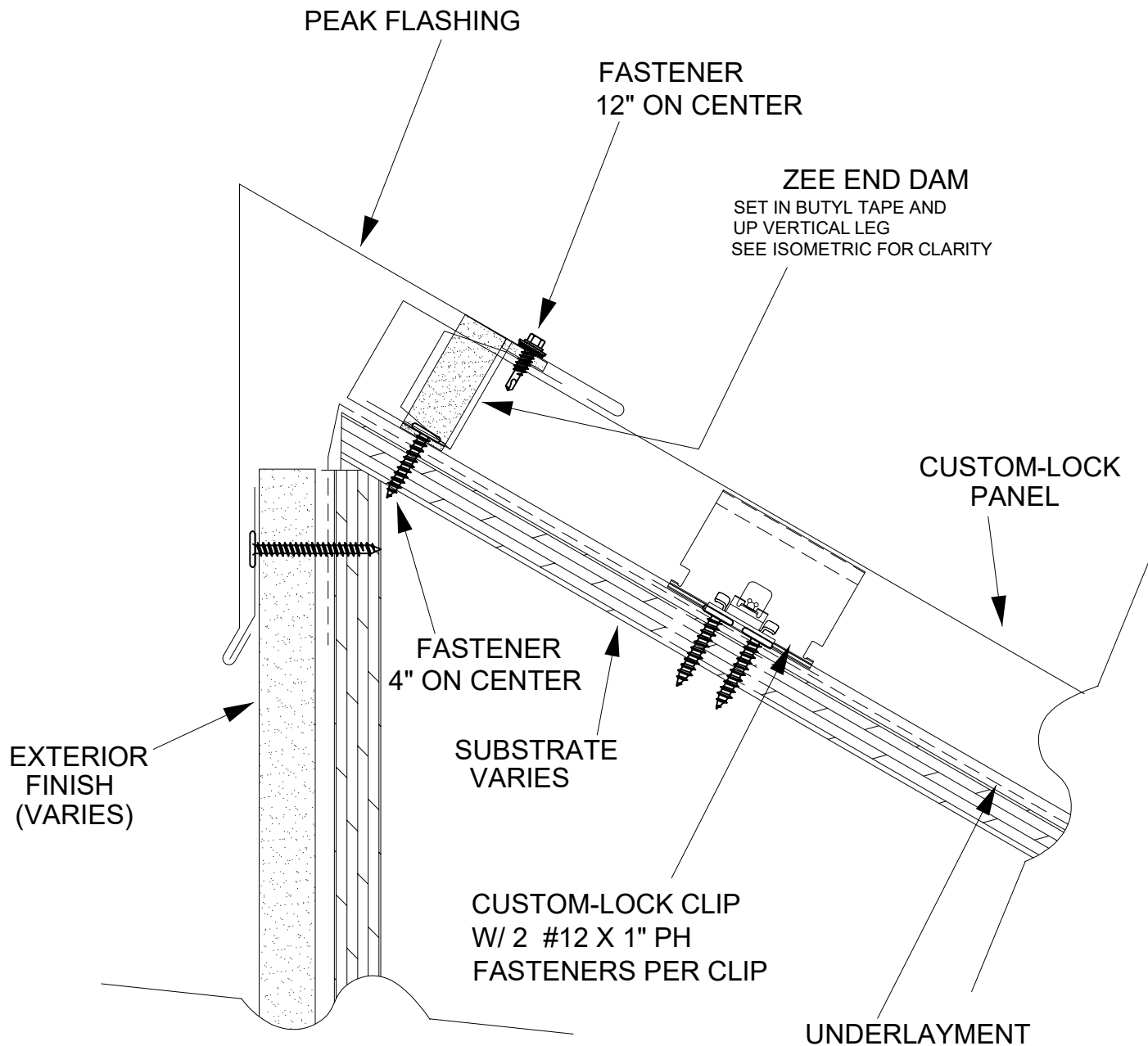
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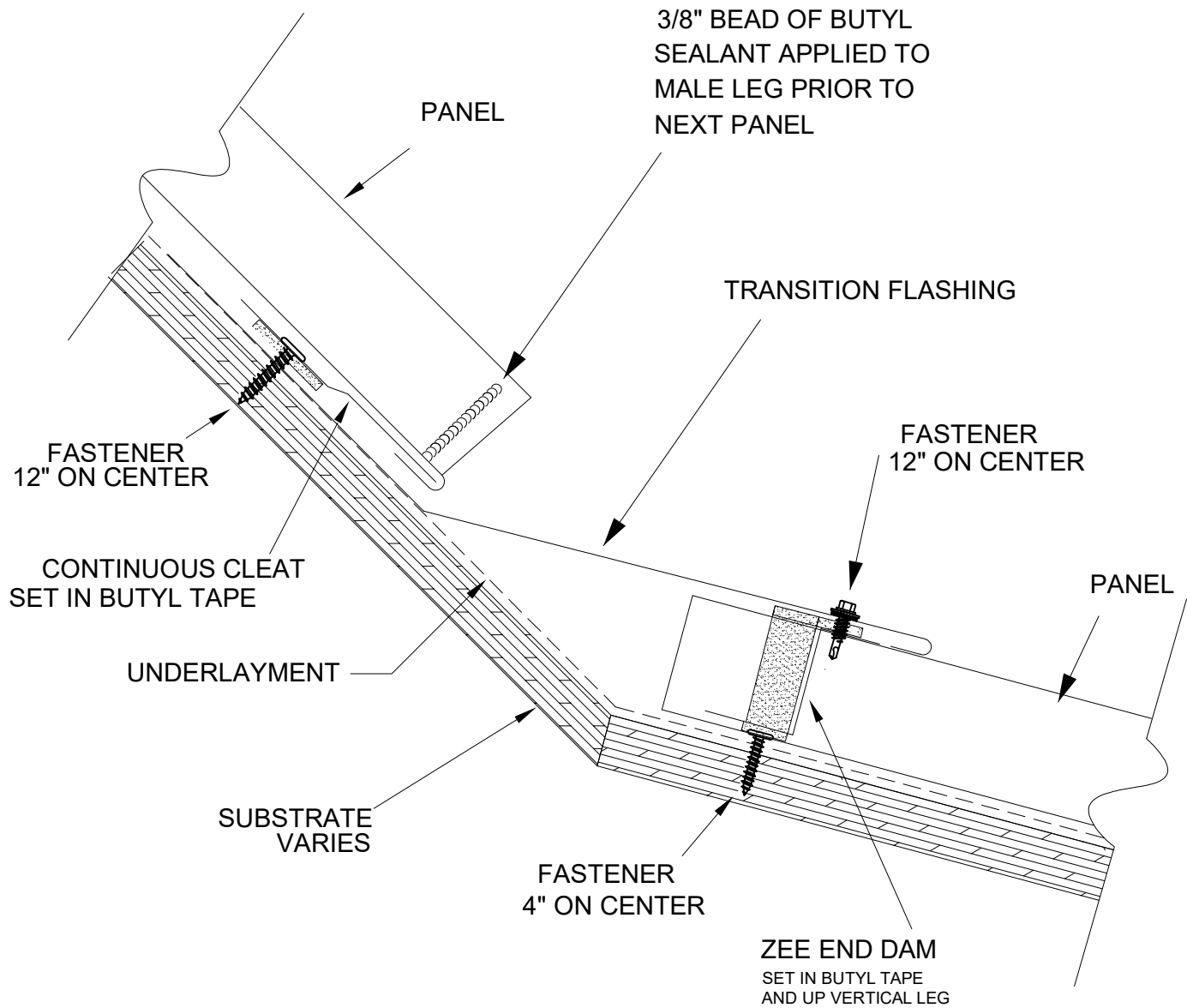


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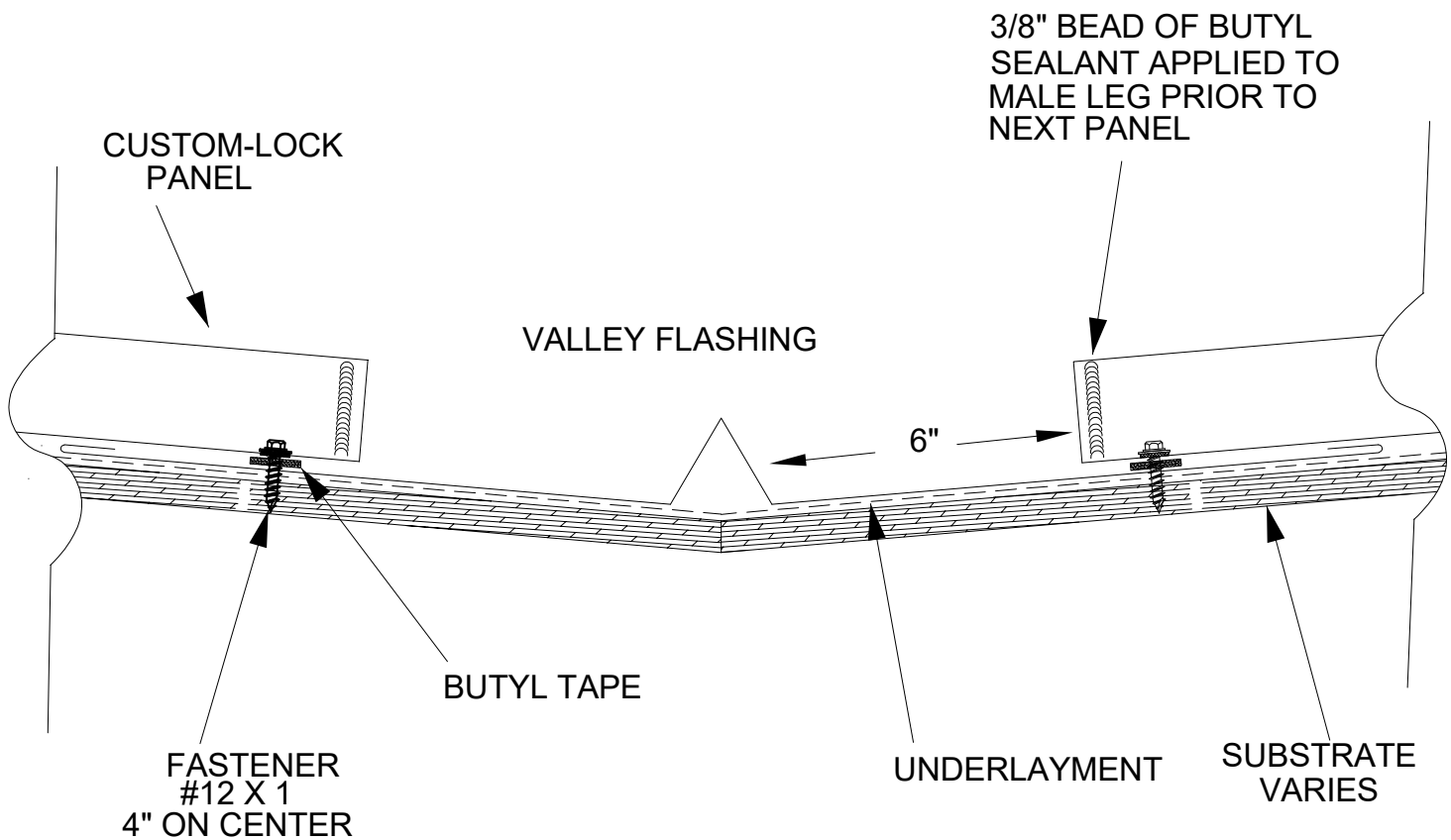
CLIP SPACING PER UPLIFT REQUIREMENTS

STEEP SLOPE TO LOW SLOPE

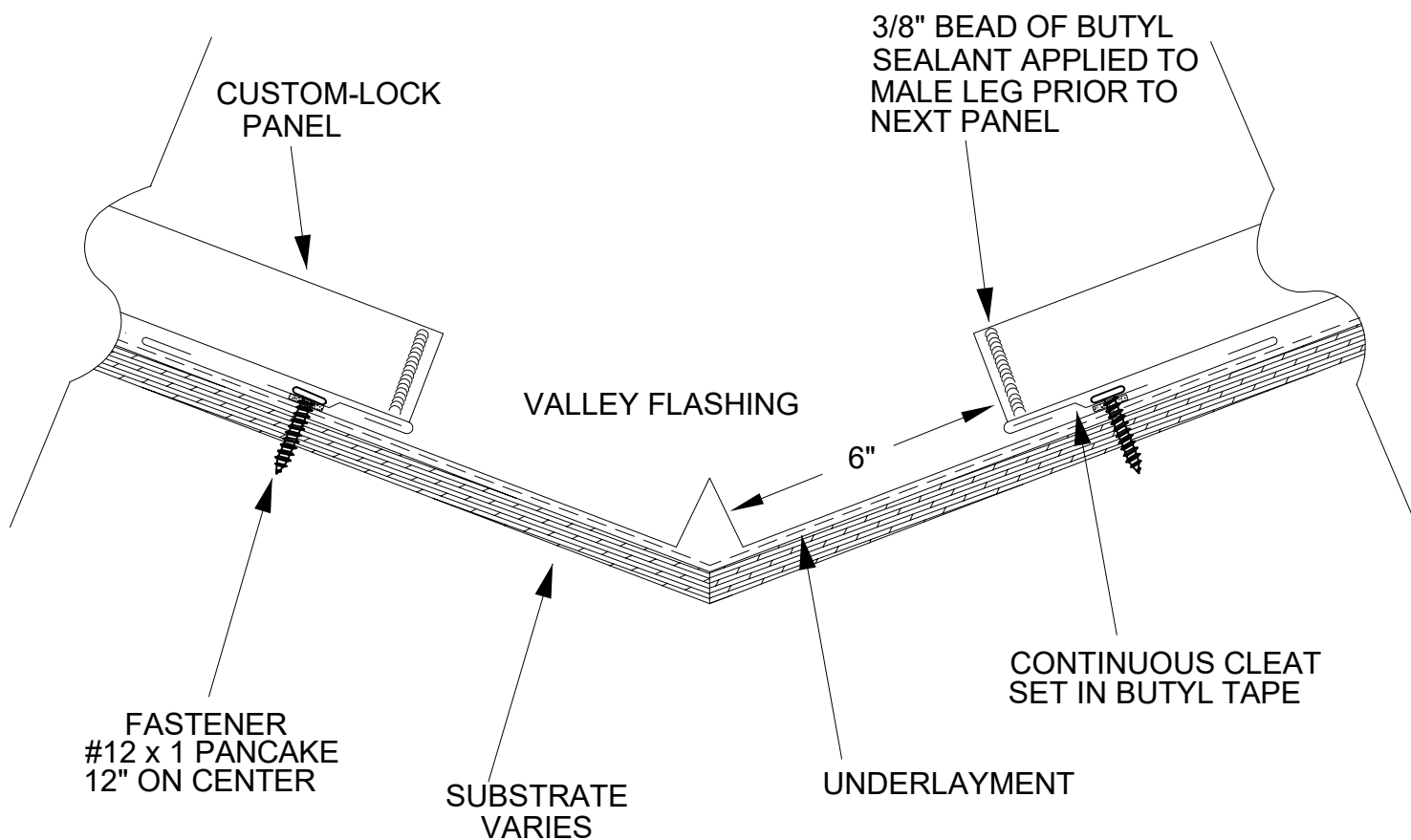


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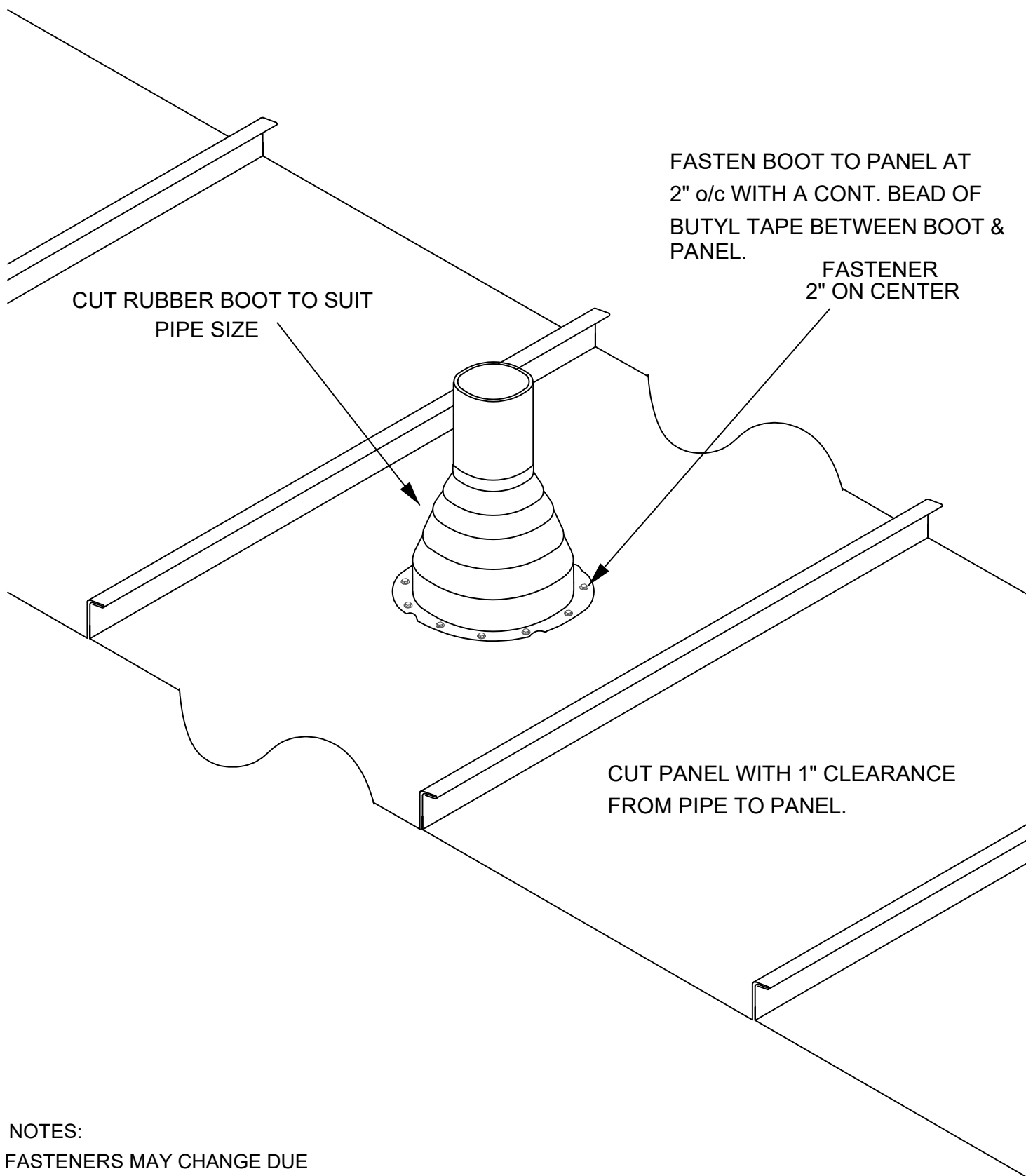
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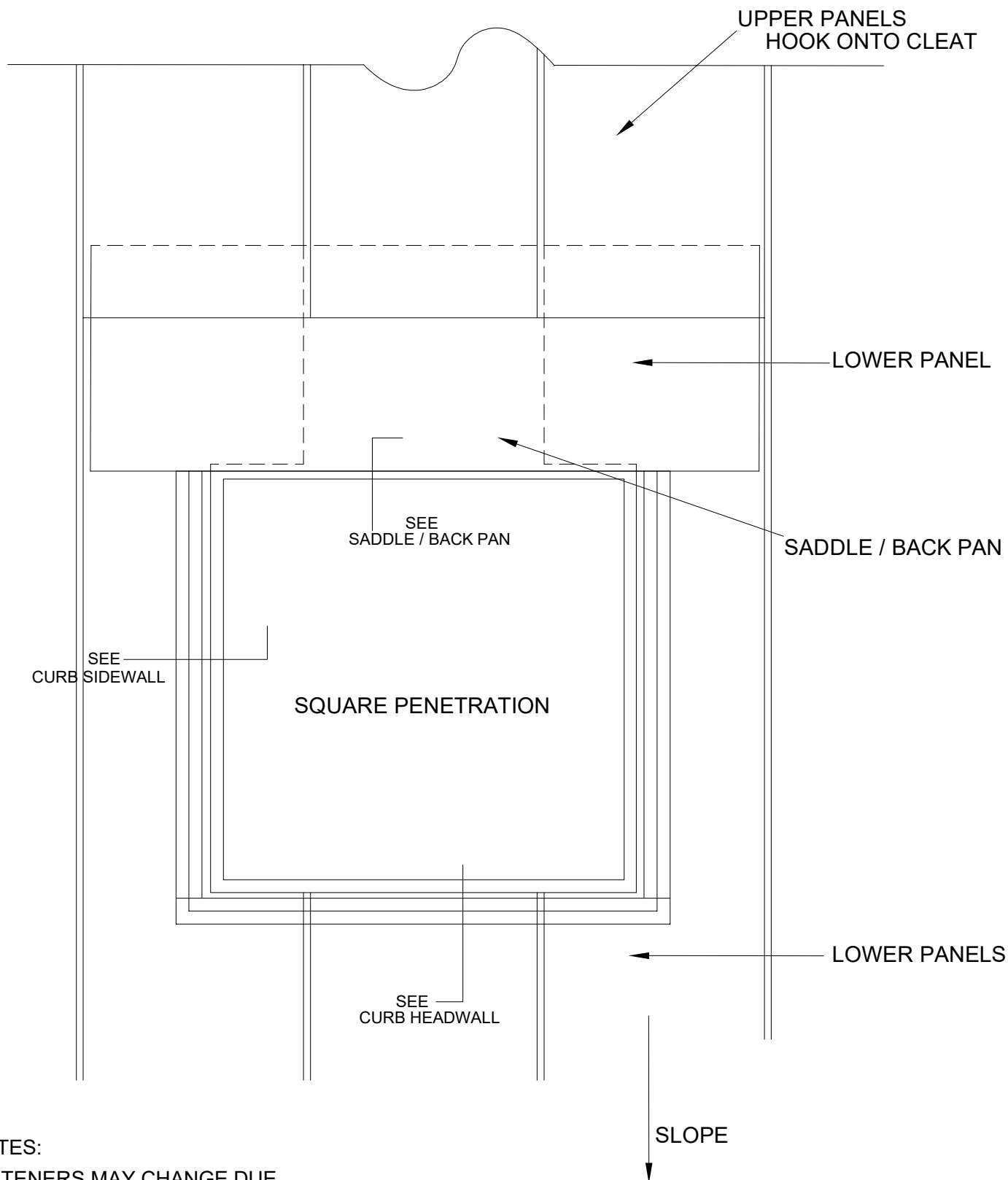
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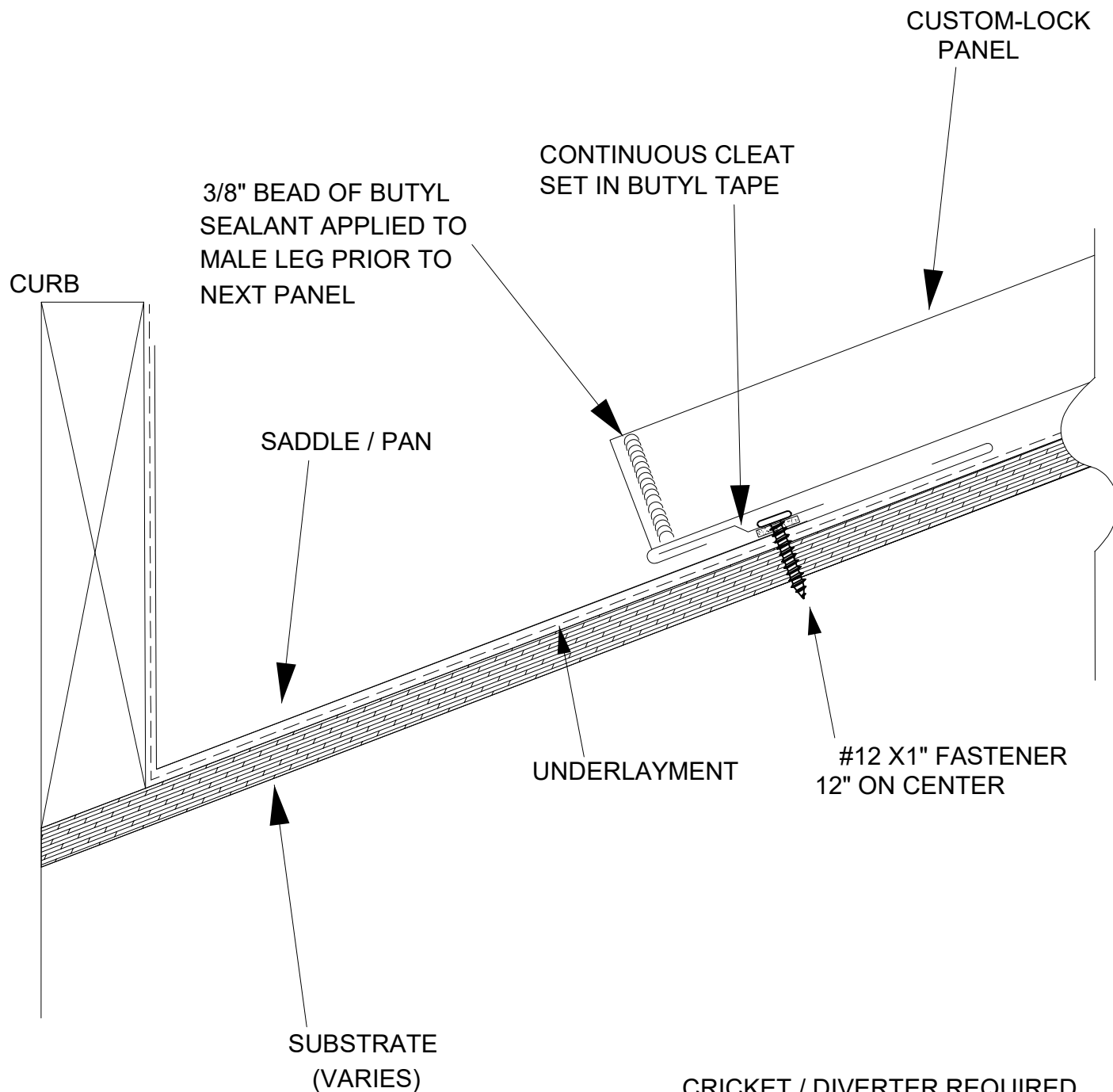
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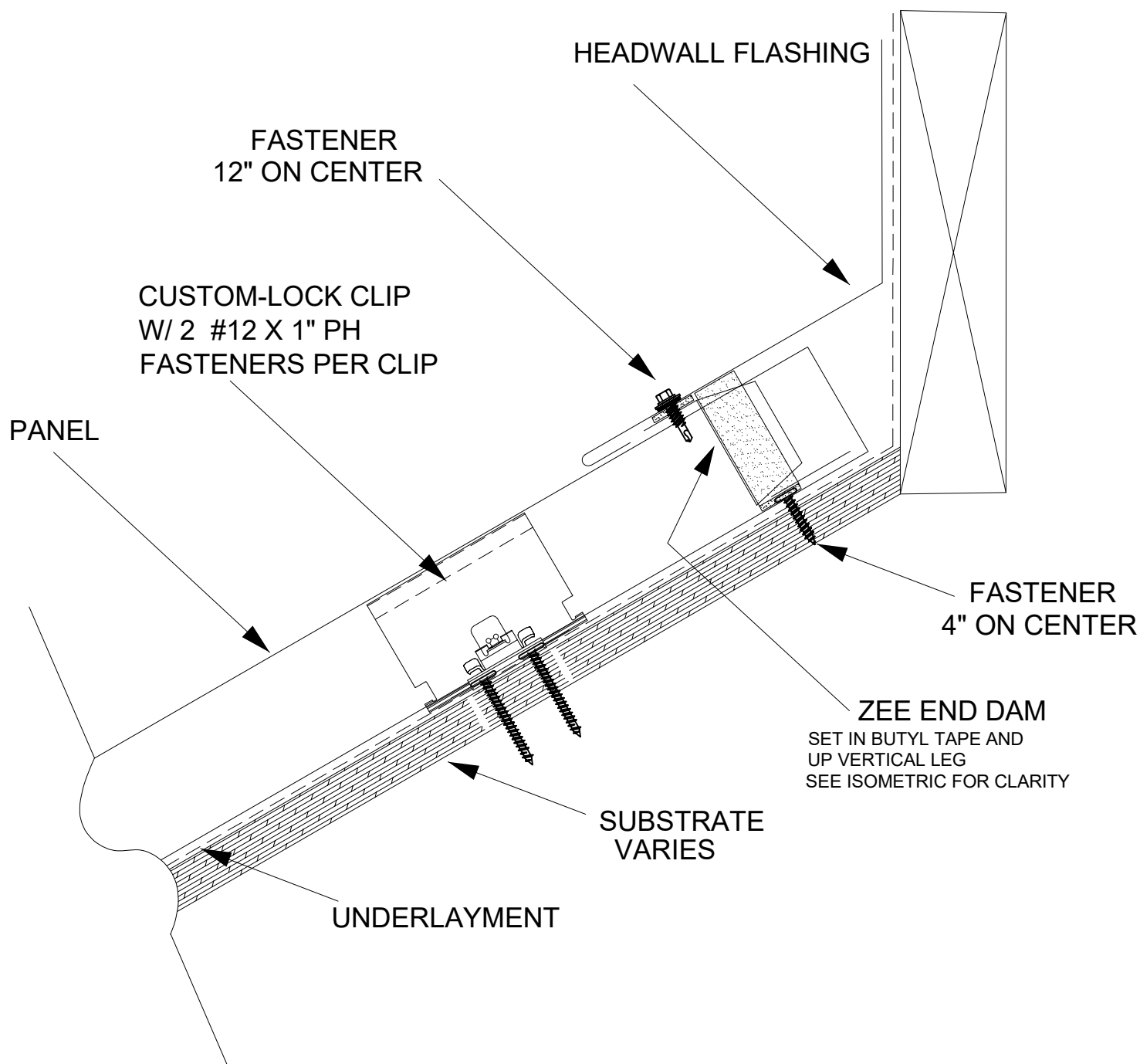
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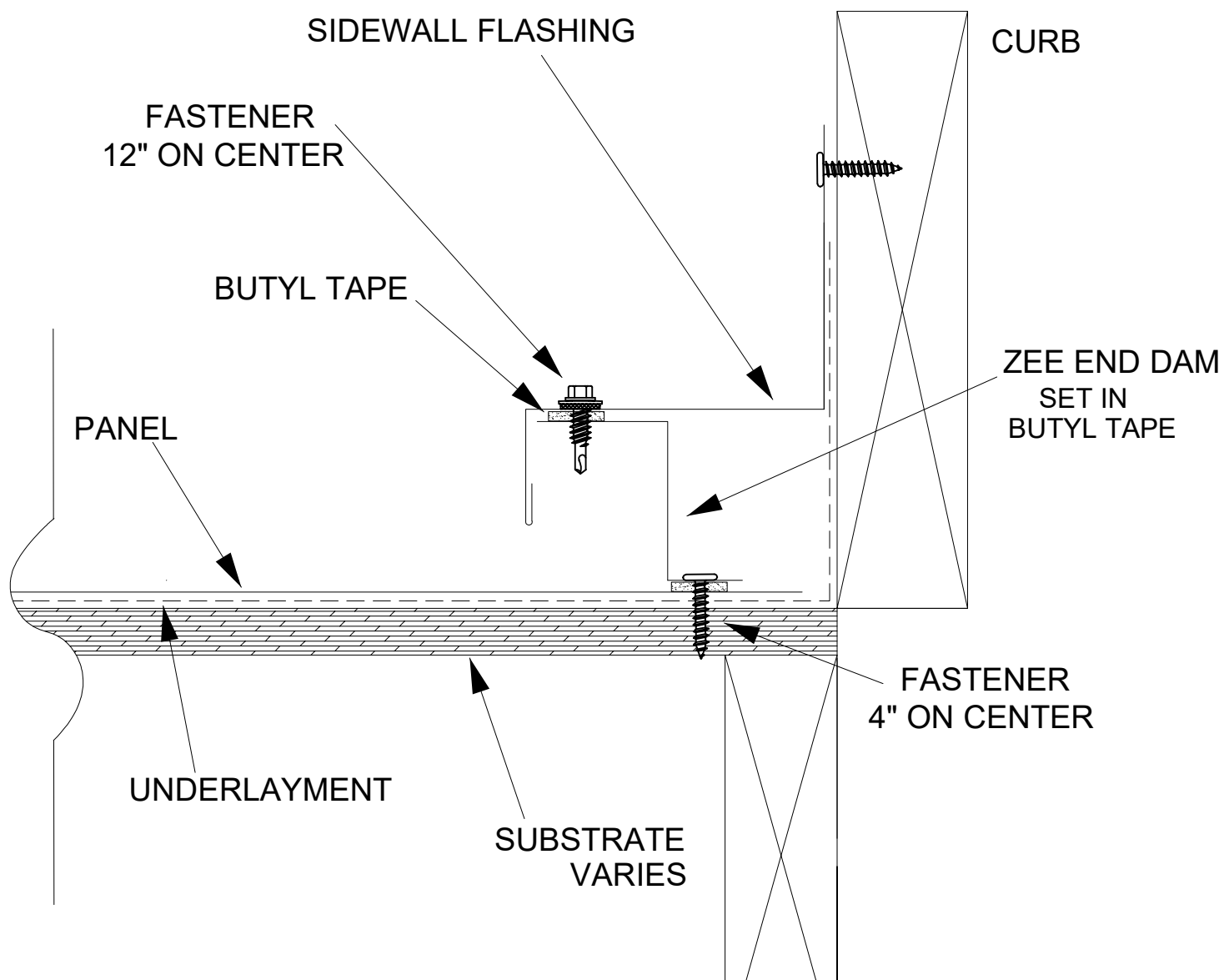
CRICKET / DIVERTER REQUIRED
WHEN CURB IS 30" OR LARGER ON
RIDGE SIDE OF PENETRATION

CLEAT DESIGN FOR ROOF SLOPES
3:12 AND GREATER

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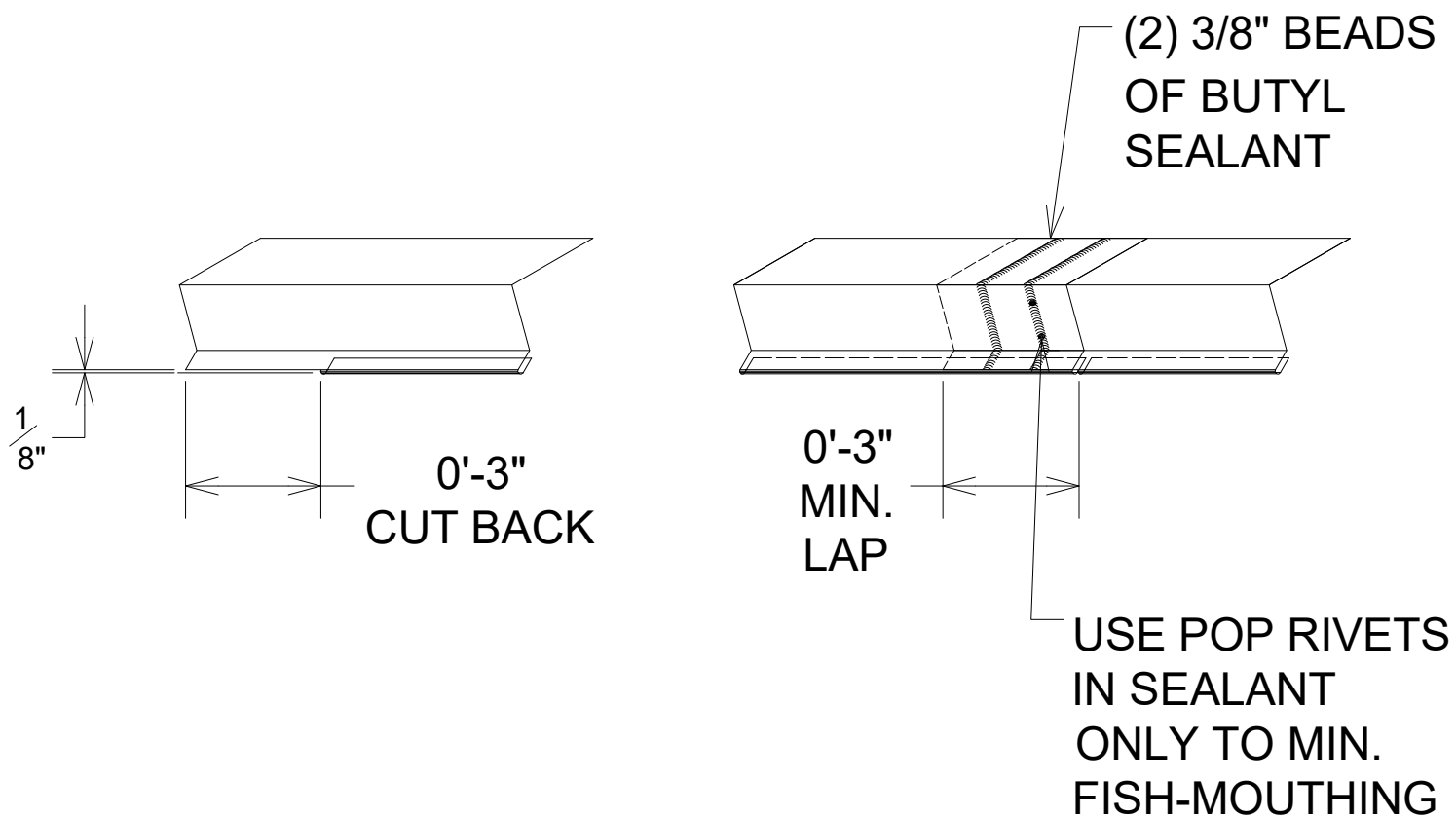


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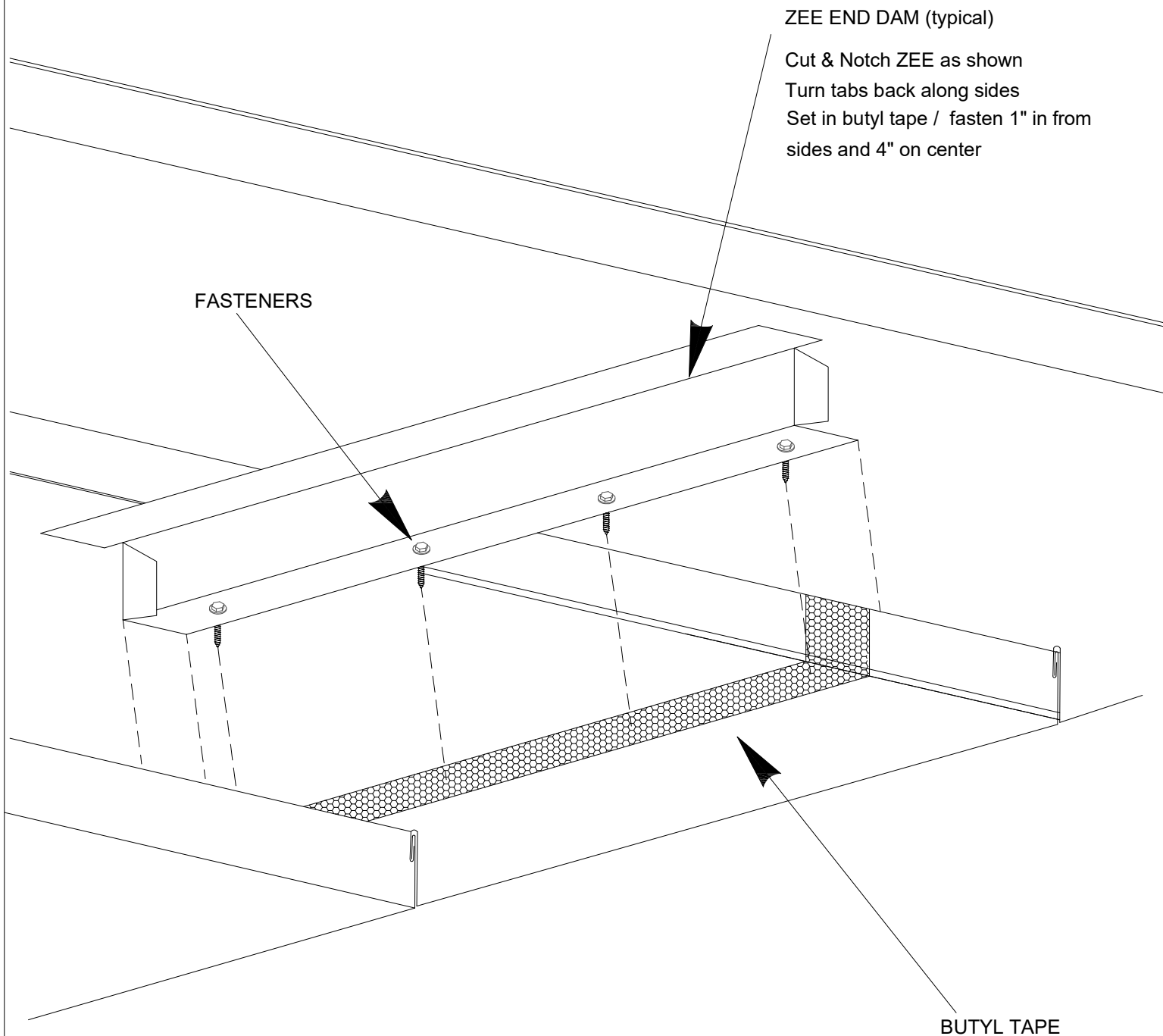
TO DIFFERENT SUBSTRATES

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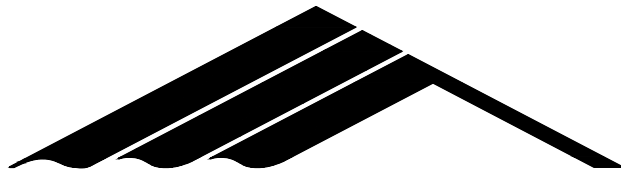


NOTES:

ALL TRIMS REQUIRE A 3" LAP EXCEPT
VALLEY TRIM WHICH REQUIRES A 9" LAP



NOTES:
FASTENERS MAY CHANGE
ACCORDING TO SUBSTRATE



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